

Remarks

In view of the above amendments and the following remarks, favorable reconsideration of the outstanding office action is respectfully requested.

Claims 1-14, 24-27, and 48-52 remain in this application.

§ 103 Rejections

Applicants respectfully traverse the rejection of claims 1-14, 24-27, and 48-52 under 35 U.S.C. § 103(a) as being unpatentable for obviousness over U.S. Patent No. 5,253,035 (Fukuoka et al), in view of U.S. Patent No. 5,119,546 (Cameron et al), and further in view of DT 24 29 810 A1 (hereinafter DT '810).

Fukuoka discloses a system for automating the testing of a length of optical fiber. In Fukuoka, holders hold each end of a plurality of optical fibers and move each end of the fibers to various testing stations.

Cameron discloses a system for manufacturing wire harness assemblies. The system includes a plurality of pallets that are moveable along a conveyor to work stations at which various assembly steps are carried out.

DT '810 seems to disclose a pallet for storage and transport of wire or cable spools.

As the Examiner has previously admitted, Fukuoka does not disclose an automated conveyor system for conveying storage spools. Furthermore, Fukuoka does not disclose both an automated test station adapted to guide a first end of the optical fiber which is stored on a storage spool to a first testing device and an automated conveyor system adapted to transport the optical fiber storage spool to the test station, as Applicants claim 1 requires.

According to the Examiner:

"Fukuoka does not explicitly disclose an automatic conveyor system for transporting the optical fiber storage spool to test stations. However, Fukuoka teaches mounting the fiber optic holder pallet to the test stations (col. 7, lines 9-19); furthermore, Cameron teaches an automatic conveyor system capable of conveying a pallet holding a loop of cable to different stations for preparing and testing (col. 7, lines 9-24; col. 9, lines 39-68); and DT '810 teaches a pallet designed for transporting cable spools (abstract; page 9, first paragraph on fig. 4). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the

automatic conveyor system of Cameron with the pallet designed in view of DT '810's teaching for transporting the pallet to a different preparing and testing stations of Fukuoka in order to automate manual loading of the optical fiber to be tested to different testing stations, since automatically conveying the holder pallet to individual testing stations in place of manually mounting the pallet at each test station without producing unexpected result requires only routine skill in the art (MPEP 2144.04 III ("Automating a manual activity"))."

Applicants respectfully disagree. For one thing, Fukuoka does not mention or suggest manually loading optical fiber at different testing stations, as the Examiner suggests in his rejection. In particular, Fukuoka discloses an automated measuring apparatus in which a plurality of optical fibers are loaded onto a pallet and the fibers are moved to various test stations. There is no mention or suggestion in Fukuoka of moving fiber spools on a pallet to different test stations. In fact, there does not appear to be any mention of fiber storage spools at all in Fukuoka. Consequently, not only is there no mention or suggestion of a manual loading of optical fiber, in fact Fukuoka is already a method of automatically testing optical fiber. Fukuoka notably achieves this result via a method which carries only the fiber ends, and does not utilize movement of fiber storage spools.

It is not readily apparent how Fukuoka is to be modified by the Examiner. The Examiner makes reference to the "fiber optic holder pallet" of Fukuoka. However, this pallet contains only a plurality of optical fibers thereon, and is notably not a pallet for holding an optical fiber storage spool. The Examiner proposes that "it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the automatic conveyor system of Cameron with the pallet designed in view of DT 810's teaching for transporting the pallet to different preparing and testing stations of Fukuoka". Applicants disagree for several reasons. First, Fukuoka relates to the testing of optical fiber, and applicants submit that one of skill in the art would not necessarily look to the teachings of optical cable or electrical wire assembly art for inspiration on how to test optical fiber. Optical fiber cables are typically comprised of many optical fibers which are enclosed in a protective jacket. Applicants' invention, on the other hand, is directed to testing of optical fiber which is stored on an optical fiber storage spool. Second, unlike applicants claimed invention, none of the references cited by the Examiner mention or suggest a storage spool

for storing optical fiber. Consequently, even if the references were combinable, such a combination would not result in applicants claimed invention. Third, substituting the pallet of the DT810 reference for the pallet in Fukuoka would seem to destroy the intended function of the Fukuoka pallet and there would appear to be no reason to store the wire harness of Cameron on a storage spool. In the Fukuoka pallet, a plurality of holders 12 are provided for holding the jacketed optical fibers to be subjected to measurement. The holders are designed to extend from the ends of the jacketed optical fibers. According to Fukuoka, "the holders 12 permit easy mechanical handling of the jacketed optical fibers in the housings H1 through H3." (column 7, lines 14-25). Thus, not only does there not appear to be any motivation to combine the references in the manner proposed by the Examiner, in fact Fukuoka indicates that his technique already permits easy mechanical handling. Thus, if anything, Fukuoka teaches away from the proposed combination.

For all of the above reasons, it is submitted that claims 1, 7, 14, 24, 48, and 52 are in condition for allowance.

With respect to claim 6, there is clearly no mention or suggestion in Fukuoka of a system wherein a spool is first conveyed to a test station and then the test station is adapted to acquire a sample length of the optical fiber and perform a test on the optical fiber. If the Patent Office is modifying the teachings of Fukuoka so that the "conveyor unit" in these patents is used to convey a fiber spool, then the same conveyor unit would no longer be suitable to convey a length of optical fiber to the test unit as required by claim 6.

The remarks made above with respect to claim 1 similarly apply to claim 7. In particular, none of the references, either alone or in combination, disclose an automated conveyor system adapted to transport the spool from the first station to the second station.

With respect to claim 9, again, if the Fukuoka carrier unit is modified to convey a spool of optical fiber, then there is no other conveyor unit present in Fukuoka to pull the first end and second end of the optical fiber, and so forth as required by claim 9.

With respect to claim 12, there is no mention or suggestion in any of the references cited by the Patent Office of a pallet for carrying a spool of optical fiber, nor is there any mention or suggestion of a radio frequency tag attached to such a pallet.

Claim 13 requires not only a conveyor to transport a spool from various test stations to other test stations, but also a first station adapted to automatically strip and cut the fiber stored on the spool, a second station adapted to guide a first and second end of the fiber to a

testing device and perform a test thereon, and a third station adapted to guide a length of fiber to a second testing device and perform a second test on said fiber. There is no mention or suggestion in any of the references cited, either alone or in combination, of such a system utilizing one conveyor system to transport an optical fiber storage spool between various automated testing stations.

With respect to claim 14, none of the references, alone or in combination, disclose first and second testing stations which are adapted to guide a sample of a length of fiber from an optical fiber storage spool and perform a test, along with an automated conveyor system which is adapted to transport the spool from the first test station to the second test station.

With respect to claim 24, none of the references, alone or in combination, disclose transporting an optical fiber storage spool which stores a length of optical fiber to a first station by an automated transportation system, acquiring a sampling of the optical fiber from the spool by a testing apparatus and testing the length of the optical fiber.

With respect to claim 48, there is no mention or suggestion in any of the references cited, alone or in combination, of placing a spool of optical fiber onto a pallet, nor is there any suggestion of placing a spool of optical fiber onto a pallet such that a first end and a second end of the fiber extend outward in a manner so as to provide easy access to both the first and second ends. There is also no mention or suggestion of transporting such a pallet to a test station where a first and second end of optical fiber is pulled from the spool and the fiber is tested.

With respect to claim 52, there is no mention or suggestion in any of the references cited, alone or in combination, of placing a spool of optical fiber onto a pallet such that a first end of fiber extends out in a manner to provide easy access and the pallet is transferred to a test station and the first end is pulled to a test device such that a first length is unwound from the spool. In fact, in Fukuoka there is no mention or suggestion of moving spools to various test stations and then pulling an end of an optical fiber from the optical fiber spool. In fact, as explained above, the teachings in Fukuoka seem to actually teach against this proposed modification.

Conclusion

Based upon the above amendments, remarks, and papers of record, Applicants believe the pending claims of the above-captioned application are in allowable form and patentable

over the prior art of record. Applicants respectfully request reconsideration of the pending claims 1-14, 24-27, and 48-52 and a prompt Notice of Allowance thereon.

Applicants believe that a one (1) month extension of time is necessary to make this Response timely. Should Applicants be in error, Applicants respectfully request that the Office grant such time extension pursuant to 37 C.F.R. § 1.136(a) as necessary to make this Reply timely, and hereby authorizes the Office to charge any necessary fee or surcharge with respect to said time extension to the deposit account of the undersigned firm of attorneys, Deposit Account 03-3325.

Please direct any questions or comments to Robert L. Carlson at 607-974-3502.

Respectfully submitted,

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